Remarks/Arguments:

This Amendment adds no new claims, and is provided to amend claims 1, 9 and 15. No new matter has been added. Upon entry of this Amendment, claims 1-17 will be pending.

Rejections of the Claims under 35 U.S.C. 103

The Examiner has rejected claims 1-3 and 6-15 under 35 U.S.C. 103(a), as being unpatentable over U.S. Patent No. 6,320,647, issued to Makino (hereinafter Makino1), in view of U.S. Patent No. 6,961,077, issued to Makino (hereinafter Makino2), and further in view of U.S. Patent No. 6,549,228, issued to Watanabe (hereinafter Watanabe). The Examiner incorrectly cited Makino2 as U.S. Patent No. 6,947,007, which is believed to be a typographical error, and the correct reference for Makino2 being U.S. Patent No. 6,961,077.

Specifically, the Examiner points to Makino1 as disclosing a multibeam light source unit comprising a diode unit, a rotating member, and a fixing member comprising a first and second member, wherein the second member extends perpendicular to the first member. The Examiner points to Makino2 as disclosing a fixing bracket to secure the fixing member to a frame, and points to Wantanabe as disclosing a fixing member bisected by a semicircular groove, purportedly rendering obvious the invention as claimed by the Applicant in claim 1.

In response to the Applicant's prior amendments and arguments, the Examiner stated that Makino1 describes a fixing member as the combination of members 10 and 12 (see Fig. 2), and that member 12 being a three dimensional object, extends perpendicular to member 10 as claimed by the Applicant in claim 1. However, the Applicant has amended claim 1 to further recite that the fixing member comprises a first member for receiving the rotating member and a second member "comprising a plurality of planar surfaces lying in the same plane and" extending substantially perpendicular from "a planar surface of" the first member and "separated" by a semicircular groove "extending continuously from the planar surface of the first

member", for securing the first member to a frame. This is not new matter, and is noted elsewhere in the specification (see paragraphs 47-48, and Figs. 3A and 3B).

In regard to claim 1 as amended, the Applicant has recited an exemplary embodiment of the present invention which comprises a fixing member with first and second perpendicular members. Specifically, the Applicant has recited a second member which has a plurality of planar surfaces that extend substantially perpendicular to a planar surface of the first member, and which are separated by a semicircular groove extending continuously from the planar surface of the first member. This is to more accurately describe an embodiment, for example, as shown in Figs. 3A and 3B, and more clearly distinguish the fixing member from the layered elements 10 and 12 of Makino1.

The Examiner points to Makino1 as disclosing a fixing member comprising the base 10 and a perpendicular extending housing thickness 12. However, the base 10 and housing 12 appear as flat portions which would lie parallel to each other, and only a thickness of the housing 12 could be seen as possibly extending from the base 10. However, neither the base 10 nor housing 12 include a planar surface that extends substantially perpendicular from the other, as the planar surfaces of 10 and 12 each lie in parallel.

Further, the Applicant has amended claim 1 to recite a second member 132 comprising a plurality of planar surfaces lying in the same plane (one on each side of the groove 133 in Applicant's Fig. 3A). The housing 12 of Makino1 does not disclose or reasonably suggest a plurality of planar surfaces lying in the same plane as claimed by the Applicant in claim 1 as amended. Further, the Applicant argues that the edge of the housing 12, if considered a planar surface, does not disclose a plurality of planar surfaces and does disclose a plurality of planar surfaces lying in the same plane that extend perpendicular from a planar surface of the base 10. Accordingly, Makino1 does not disclose nor reasonably suggest, alone or in combination with Makino2 and Wantanabe, a fixing member comprising a first and second member,

wherein the second member comprises planar surfaces that lie in the same plane and extend perpendicular to the first member.

The Examiner points to Makino2 as disclosing a fixing bracket to secure the fixing member to a frame. However, as above, Makino2 also does not disclose nor reasonably suggest, alone or in combination with Makino1 and Wantanabe, a fixing member comprising a first and second member, wherein the second member comprises a plurality of planar surfaces lying in the same plane and extending perpendicular to the first member. The four sided bracket 49 of Fig. 8A of Makino2, does not disclose nor reasonably suggest, alone or in combination with Makino1 and Wantanabe, a plurality of planar surfaces that lie in the same plane and extend perpendicular to the first member. Each side of the bracket 49 lies in a different plane.

The Examiner points to Wantanabe as disclosing a fixing member bisected by a semicircular groove. However, the Applicant has amended claim 1 to further recite that the fixing member comprises a first member 131 for receiving the rotating member and a second member 132 comprising a plurality of planar surfaces lying in the same plane and extending substantially perpendicular from a planar surface of the first member and "separated" by a semicircular groove 133 "extending continuously from the planar surface of the first member", for securing the first member to a frame. This is not new matter, and is noted elsewhere in the specification (see paragraphs 47-48, and Figs. 3A and 3B). The Wantanabe reference describes a semicircular opening in the frame 27 that is separated some distance from the PCB 2, and does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, which do not describe a groove at all, a semicircular groove extending continuously from the planar surface of the first member.

Further, as above, the Wantanabe reference also does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a fixing

member comprising a first and second member, wherein the second member comprises a plurality of planar surfaces lying in the same plane and extending perpendicular from the first member. The flat surfaces of frame 27 in Wantanabe Fig. 9 are clearly disposed some distance from the surface of the PCB 2, and do not disclose nor reasonably suggest, alone or in combination with Makino 1 and Makino 2, a plurality of planar surfaces lying in the same plane and extending perpendicular from the first member.

Accordingly, the Applicant asserts that the Makino1, Makino2 and Wantanabe references do not disclose nor reasonably suggest, alone or in combination, each element of claim 1 as amended. Specifically, the Applicant asserts that the base and housing of the Makino1 and Makino2 references do not disclose nor reasonably suggest a second member comprising a plurality of planar surfaces lying in the same plane and extending substantially perpendicular from a first member, and that the frame 27 of the Wantanabe reference does not disclose nor reasonably suggest a semicircular groove extending continuously from the planar surface of the first member, as claimed by the Applicant in claim 1 as amended. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claim 1, and dependent claims 2-3 and 6-8, which depend from claim 1, for the same reasons.

The Applicant has also amended claim 9 in a similar manner, and respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claim 9, and dependent claims 10-14, which depend from claim 9, for the same reasons.

The Applicant has also amended claim 15 in a similar manner, and respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claim 15 for the same reasons.

Regarding claims 2 and 3, the Examiner points to Makino1 as disclosing a rotating member having a press fit hole and a fixing member with first and second members, purportedly rendering obvious the invention as claimed by the Applicant in

claim 2. The Examiner further points to Makino1 as disclosing a rotating member having a pair of arc-shaped holes into which a pair of screws is inserted to fix the rotating member to the first member of the fixing member, purportedly rendering obvious the invention as claimed by the Applicant in claim 3.

However, for the reasons noted above, the Applicant asserts that the Makino1, Makino2 and Wantanabe references do not disclose nor reasonably suggest, alone or in combination, each element of claim 1 as amended, from which claims 2 and 3 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 2 and 3 for the same reasons.

Regarding claims 6 and 7, the Examiner points to Makino1 as disclosing a driving circuit board, purportedly rendering obvious the invention as claimed by the Applicant in claim 6. Further, the Examiner points to Makino1 as disclosing a collimating lens and lens holder, the lens holder being placed in the second member of the fixing unit, purportedly rendering obvious the invention as claimed by the Applicant in claim 7.

However, for the reasons noted above, the Applicant asserts that the Makino1, Makino2 and Wantanabe references do not disclose nor reasonably suggest, alone or in combination, each element of claim 1 as amended, from which claims 6 and 7 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 6 and 7 for the same reasons.

The Examiner has rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Makino1 in view of Makino2, and in view of Watanabe. Specifically, regarding claim 8, the Examiner points to Makino1 as disclosing the claimed invention with the exception of the semicircular groove of the second member having holes at both sides. The Examiner points to Makino2 as disclosing a bracket with holes at both sides, and points to Watanabe as disclosing a semicircular

shaped frame 27 supporting a collimating lens 3, purportedly rendering obvious the invention as claimed by the Applicant in claim 8.

However, the U shaped frame 27 of Watanabe is not a part of a single fixing member, but is provided in addition to the fixing member 13, that itself is secured to the circuit board 2 (see col. 5, lines 28-41). The movable member 12 is interposed between fixing member 13 and the U shaped frame 27 (see Fig. 7 and Fig. 9). Accordingly, the U shaped frame 27 does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a semicircular groove extending continuously from the planar surface of first member as claimed by the Applicant in claim 1 as amended, from which claim 8 depends. In contrast, the frame 27 is provided separately, and is positioned at a distance defined by elements 13, 12, 1 and 26.

Accordingly, the Applicant asserts that neither the Makino1, Makino2 or Watanabe references, disclose or reasonably suggest, alone or in combination, a semicircular groove extending continuously from the planar surface of first member as claimed by the Applicant in claim 1 as amended, from which claim 8 depends. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claim 8, for the same reasons.

The Examiner has rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Makino1 in view of Makino2, and further in view of Wantanabe. However, as noted above, the Applicant has amended claim 9 to further recite that the fixing member comprises a first member for receiving the rotating member and a second member "comprising a plurality of planar surfaces lying in the same plane and" extending substantially perpendicular from "a planar surface of" the first member and "separated" by a semicircular groove "extending continuously from the planar surface of the first member", for securing the first member to a frame. This is not new matter, and is noted elsewhere in the specification (see paragraphs 47-48, and Figs. 3A and 3B).

In regard to claim 9 as amended, the Applicant has recited an exemplary embodiment of the present invention which comprises a second member which has a plurality of planar surfaces that extend substantially perpendicular to a planar surface of the first member, and which are separated by a semicircular groove extending continuously from the planar surface of the first member.

The Examiner points to Makino1 as disclosing a fixing member comprising the base 10 and a perpendicular extending housing thickness 12. However, neither the base 10 nor housing 12 include a planar surface that extends substantially perpendicular from the other, as the planar surfaces of 10 and 12 each lie in parallel.

Further, the Applicant has amended claim 9 to recite a second member comprising a plurality of planar surfaces lying in the same plane (one on each side of the groove). The housing 12 does not disclose or reasonably suggest a plurality of planar surfaces lying in the same plane as claimed by the Applicant in claim 9 as amended. Further, the Applicant argues that the edge of the housing 12, if considered a planar surface, does not disclose a plurality of planar surfaces and does not disclose a plurality of planar surfaces lying in the same plane that extend perpendicular from a planar surface of the base 10. Accordingly, Makino1 does not disclose nor reasonably suggest, alone or in combination with Makino2 and Wantanabe, a fixing member comprising a first and second member, wherein the second member comprises planar surfaces that lie in the same plane and extend perpendicular to the first member.

The Examiner points to Makino2 as disclosing a fixing bracket to secure the fixing member to a frame. However, as above, Makino2 also does not disclose nor reasonably suggest, alone or in combination with Makino1 and Wantanabe, a fixing member comprising a first and second member, wherein the second member comprises a plurality of planar surfaces lying in the same plane and extending perpendicular to the first member. The four sided bracket 49 of Fig. 8A, does not disclose nor reasonably suggest, alone or in combination with Makino1 and Wantanabe, a plurality of planar surfaces that lie in the same plane and extend

perpendicular to the first member. Each side of the bracket 49 lies in a different plane.

The Examiner points to Wantanabe as disclosing a fixing member bisected by a semicircular groove. However, the Applicant has amended claim 9 to further recite that the fixing member comprises a first member for receiving the rotating member and a second member comprising a plurality of planar surfaces lying in the same plane and extending substantially perpendicular from a planar surface of the first member and "separated" by a semicircular groove "extending continuously from the planar surface of the first member", for securing the first member to a frame. This is not new matter, and is noted elsewhere in the specification (see paragraphs 47-48, and Figs. 3A and 3B). The Wantanabe reference describes a semicircular opening in the frame 27 that is separated some distance from the PCB 2, and does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a semicircular groove extending continuously from the planar surface of the first member.

Further, as above, the Wantanabe reference also does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a fixing member comprising a first and second member, wherein the second member comprises a plurality of planar surfaces lying in the same plane and extending perpendicular from the first member. The flat surfaces of frame 27 in Wantanabe Fig. 9 are clearly disposed some distance from the surface of the PCB 2, and do not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a plurality of planar surfaces lying in the same plane and extending perpendicular from the first member.

Accordingly, the Applicant asserts that the Makino1, Makino2 and Wantanabe references do not disclose nor reasonably suggest, alone or in combination, each element of claim 9 as amended. Accordingly, the Applicant respectfully requests the

withdrawal of the rejection under 35 U.S.C. 103(a) of independent claim 9, and dependent claims 12-14, which depend from claim 9, for the same reasons.

Regarding claims 10 and 11, the Examiner points to Makino2 as disclosing the fixing of the light source unit to the bottom of the frame via the second member, purportedly rendering obvious the invention as claimed by the Applicant in claim 10. Regarding claim 11, the Examiner also points to Makino1 as disclosing the polygon mirror and image resulting lens, purportedly rendering obvious the invention as claimed by the Applicant in claim 11.

However, for the reasons noted above, the Applicant asserts that the Makino1 and Makino2 references do not disclose nor reasonably suggest, alone or in combination with the Wantanabe reference, each element of claim 9 as amended, from which claims 10 and 11 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 10 and 11 for the same reasons.

Regarding claims 12 and 13, the Examiner points to Makino1 as disclosing the press fit hole of the rotating member and the rotating boss of the fixing member, and the collimating lens and lens holder, purportedly rendering obvious the invention as claimed by the Applicant in claims 12 and 13.

However, for the reasons noted above, the Applicant asserts that the Makino1 reference does not disclose nor reasonably suggest, alone or in combination with the Makino2 and Wantanabe references, each element of claim 9 as amended, from which claims 12 and 13 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 12 and 13 for the same reasons.

Regarding claim 14, the Examiner points to Makino1 and Makino2 as disclosing the subject matter described above, and points to Watanabe as disclosing a

semicircular groove for receiving a lens holder and having a plurality of holes for fixing the member to an object, purportedly rendering obvious the invention as claimed by the Applicant in claim 14.

However, as noted above, the U shaped frame 27 of Watanabe is not a part of a single fixing member, but is provided in addition to the fixing member 13, that itself is secured to the circuit board 2 (see col. 5, lines 28-41). The movable member 12 is interposed between fixing member 13 and the U shaped frame 27 (see Fig. 7 and Fig. 9). Accordingly, the U shaped frame 27 does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, a semicircular groove extending continuously from the planar surface of first member as claimed by the Applicant in claim 9 as amended, from which claim 14 depends. In contrast, the frame 27 is provided separately, and is positioned at a distance defined by elements 13, 12, 1 and 26.

Accordingly, the Applicant asserts that neither the Makino1, Makino2 or Watanabe references, disclose or reasonably suggest, alone or in combination, a semicircular groove extending continuously from the planar surface of first member as claimed by the Applicant in claim 9 as amended, from which claim 14 depends. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claim 14, for the same reasons.

Regarding claim 15, the Examiner points to Makino1, Makino2 and Wantanabe as disclosing the fabrication of a multibeam light source, purportedly anticipating the invention as claimed by the Applicant in claim 15.

However, the Applicant has amended claim 15 to further recite the step of placing a collimating lens assembly in a semicircular groove "extending continuously from a planar surface of the first member" across a second member of the fixing member "comprising a plurality of planar surfaces lying in the same plane" extending substantially perpendicular from "the planar surface of" the first member of the fixing member, in a sub-assembly process and mounting the "assembled" multibeam light

source unit into a frame in a main assembly process. This is not new matter, and is noted elsewhere in the specification (see paragraphs 47-48, and Figs. 3A and 3B).

In contrast, the Wantanabe reference describes a semicircular opening in the frame 27 that is separated some distance from the PCB 2, and does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, placement of a collimating lens assembly in a semicircular groove extending continuously from the planar surface of the first member. The continuous semicircular groove allows unobstructed communication of the laser, through the first member and the second member of the fixing unit, even where the second member extends perpendicular from the first member, provides a position to secure the collimating lens assembly in the laser path, and still further distributes the means to secure the fixing member (134 of Applicant's Fig. 3a) into a frame.

Further, as above, Wantanabe also does not disclose nor reasonably suggest, alone or in combination with Makino1 and Makino2, placement of a collimating lens assembly in a second member of a fixing member, wherein the second member comprises a plurality of planar surfaces lying in the same plane and extending perpendicular from the first member, which serve to distribute the means to secure the fixing member to the frame along the path of the laser.

Accordingly, the Applicant asserts that the Makino1, Makino2 and Wantanabe references do not disclose nor reasonably suggest, alone or in combination, each element of claim 15 as amended. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claim 15.

The Examiner has rejected claims 4-5 and 16-17 under 35 U.S.C. 103(a) as being unpatentable over Makino1 in view of Makino2, further in view of Wantanabe, and still further in view of U.S. Patent No. 5,774,248, issued to Komatsu (hereinafter Komatsu). Specifically, regarding claim 4, the Examiner points to Makino1 and Makino2 as disclosing the claimed invention with the exception of the gear section. The Examiner points to Komatsu as disclosing the gear section at one side,

purportedly rendering obvious the invention as claimed by the Applicant in claim 4, and points to general notice given as disclosing a use of a plurality of rotary gears to provide better control of a rotating member.

However, for the reasons noted above, the Applicant asserts that the Makino1, Makino2, Wantanabe and Komatsu references, do not disclose nor reasonably suggest, alone or in combination, each element of claim 1 as amended, from which claims 4 and 5 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 4 and 5 for the same reasons.

Regarding claims 16-17, the Examiner points to Makino1, Makino2 and Wantanabe as disclosing the claimed invention with the exception of the alignment jig. The Examiner points to Komatsu as disclosing the alignment jig, purportedly rendering obvious the invention as claimed by the Applicant in claims 16 and 17.

However, for the reasons noted above, the Applicant asserts that the Makino1, Makino2, Wantanabe and Komatsu references, do not disclose nor reasonably suggest, alone or in combination, each element of claim 15 as amended, from which claims 16 and 17 depend. Accordingly, the Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 16 and 17 for the same reasons.

Conclusion

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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